CLAIMS

WHAT IS CLAIMED IS:

1. A method comprising:

adding direction to interference edges of a register interference graph; and

choosing a node of said register interference graph to spill based upon a pass degree of said node.

2. The method of Claim 1 further comprising building said register interference graph.

3. The method of Claim 1 wherein said register interference graph comprises:

a first node;

a second node; and

an interference edge between said first node and said second node, said first node being a primary node.

4. The method of Claim 3 wherein said second node is a secondary node.

5. The method of Claim 4 wherein said interference edge consists of a uni-directional interference edge.

6. The method of Claim 4 wherein an end of said interference edge adjacent said first node comprises a pass edge and wherein an end of said interference edge adjacent said second node comprises a non-pass edge.

7. The method of Claim 3 wherein said second node is a primary node.

8. The method of Claim 7 wherein said interference edge consists of a bi-directional interference edge.

9. The method of Claim 7 wherein an end of said interference edge adjacent said first node comprises a pass edge and wherein an end of said interference edge

adjacent said second node comprises a pass edge.

10. The method of Claim 3 wherein a first variable associated with said first node is live when a second variable associated with said second node is defined or used.

11. A method comprising:

building an interference graph comprising defining an interference edge between a first node and a second node;

determining that a first variable associated with said first node is live when a second variable associate with said second node is defined or used; and

defining an end of said interference edge adjacent said first node as a pass edge.

12. The method of Claim 11 further comprising defining a pass degree of said first node as a number of pass edges of said first node.

13. The method of Claim 12 further comprising using said pass degree when choosing to spill a node from said register interference graph.

14. A system comprising:

a processor; and

a memory having a method of allocating a set of variables to a set of physical registers using selective spilling stored therein, wherein upon execution of said method, said method comprises:

building an interference graph comprising defining an interference edge between a first node and a second node;

determining that a first variable associated with said first node is live when a second variable associate with said second node is defined or used; and

defining an end of said interference edge adjacent

said first node as a pass edge.

15. The system of Claim 14 wherein said method further comprises defining a pass degree of said first node as a number of pass edges of said first node.

16. The system of Claim 15 wherein said method further comprises using said pass degree when choosing to spill a node from said register interference graph.

17. A computer program product having a method of allocating a set of variables to a set of physical registers using selective spilling stored therein, wherein upon execution of said method, said method comprises:

adding direction to interference edges of a register interference graph; and

choosing a node of said register interference graph to spill based upon a pass degree of said node.

18. The computer program product of Claim 17 wherein said method further comprises building said register interference graph.

19. The computer program product of Claim 17 wherein said register interference graph comprises:

a first node;

a second node; and

an interference edge between said first node and said second node, said first node being a primary node.

20. The computer program product of Claim 19 wherein said second node is a secondary node.

21. The computer program product of Claim 20 wherein said interference edge consists of a uni-directional interference edge.

22. The computer program product of Claim 20 wherein an end of said interference edge adjacent said first node comprises a pass edge and wherein an end of said interference edge adjacent said second node comprises a non-pass edge.

23. The computer program product of Claim 19 wherein said second node is a primary node.

24. The computer program product of Claim 23 wherein said interference edge consists of a bi-directional interference edge.

25. The method of Claim 23 wherein an end of said interference edge adjacent said first node comprises a pass edge and wherein an end of said interference edge adjacent said second node comprises a pass edge.

26. The method of Claim 19 wherein a first variable associated with said first node is live when a second variable associated with said second node is defined or used.

27. A computer system comprising:

means for adding direction to interference edges of a register interference graph; and

means for choosing a node of said register interference graph to spill based upon a pass degree of said node.

28. The computer system of Claim 27 further comprising means for building said register interference graph.

29. The computer system of Claim 27 further comprising means for spilling said node.